Assessing, Recording and Analysing Learner Progress and Outcomes

A report by HM Inspectorate of Education for the Scottish Further and Higher Education Funding Council

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1.   Introduction

Scotland's colleges provide education and training for around 400,000 learners every year. For some learners, it will include programmes of full-time study and nationally recognised awards. Most learners will be involved in part-time study and many will also be in employment. Some will be second or third chance learners whose initial steps may be small and it may be difficult to measure the extent of their progress.

Success on a programme can be viewed in different ways. The **hard outcomes** of learner retention and attainment give important measures of success in terms of the number of learners gaining programme awards. But this only gives a partial view. These learners will also have important **achievements** in terms of gaining wider skills and making **progress** from previous learning. For many other learners, their real success is in this latter kind of achievement and progress, even if they fail to complete the whole programme – and for these learners sometimes the educational journey will take a longer period of time.

The annual collection and publication by the Scottish Further and Higher Education Funding Council (SFC) of college performance indicators has focused attention on what these indicators actually tell and whether they provide a fully comprehensive and meaningful story of what college learners achieve. Since 2005 HMIE has overtly made more holistic evaluations of learner progress and outcomes[1] and graded accordingly during external reviews. At the same time, colleges have been working to strike a balance across the various aspects of learner progress and outcomes of learners in a real attempt to form an overall measure of learner success.

HMIE has consulted widely and engaged with Scotland's colleges to reach an understanding of the value and use of performance indicators (PIs) and other measures to assess learner progress and outcomes and to capture the views of colleges. This report summarises and comments upon the practices of Scotland's colleges in the use of performance indicators and their developments in recording and assessing the wider achievement of learners. The report also makes recommendations on the use of PIs within colleges and on the development of national measures of learner achievement.

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[1] Learner progress and outcomes is element A7 of the *SFC/HMIE Quality Framework for Scotland's Colleges*, May 2004

2.   Methodology

The report draws on a range of evidence, including from 43 HMIE college reviews carried out since January 2005 and other HMIE contacts with colleges. Desk research on reports and literature from the college sector in Scotland and the rest of the UK formed essential background evidence for the report.

A substantial questionnaire provided much evidence for this report. It was completed and returned by 33 of Scotland's 43 colleges (77%). Visits to colleges helped to confirm initial findings and evaluate good practice for wider dissemination.

Members of the Scottish Further Education Unit (SFEU) *Quality Community of Practice (*formerly *the Quality Improvement Forum)* provided useful contributions to a range of issues identified by the task. Staff from SFC's statistics branch also provided valuable information to inform this task.

Finally, a dissemination event to share initial findings of the report attracted contributors from 23 colleges. Workshop activities helped to shape aspects of its content.

A full list of those colleges that provided views and information to inform this task is given in Appendix 5.

3.   Summary of findings

Scotland's colleges have used a range of PIs to measure learner retention and attainment on programmes of study since the early 1990s. Almost all colleges used PI data to support programme self-evaluation to inform actions for improvement in portfolio planning. More than a few colleges also reviewed and evaluated overall attainment at college level using PI data.

Since 2001, SFC has routinely published an annual set of college sector PIs. Colleges questioned the usefulness of these aggregated PIs for individual institutions and the meaningfulness of cross-college comparisons at this level.

Colleges had mixed views on the programme attainment PIs. They acknowledged the value of the student outcomes PI, particularly for learners partially achieving a group award. However, staff familiarity with the SPAR PI and its historical use in trend analysis in more than a few colleges were barriers to moving over to the student outcome measure.

Colleges had started to use a range of approaches to capture the progress and wider achievements of learners as a result of a programme of study. Almost all colleges used some form of Individual Learning Plan (ILP) as the tool to record and assess learner progress. Most colleges also used ILPs to stimulate progress and achievement and involved learners in self-assessment and goal-setting.

Colleges had started to use a mix of objective measures, semi-objective measures and subjective assessment to evaluate the overall distance travelled by learners. Most colleges thought that the development of national measures of distance travelled was desirable, although a number of significant barriers to development were acknowledged.

About half of colleges were involved in benchmarking in partnership with other colleges and most colleges also found the SFC benchmarking tool helpful. Almost all colleges had embedded some form of trend analysis covering aspects of attainment, progress and achievement into their systems and processes, and this analysis had the capacity to inform teams at all levels.

4.   Learner progress and outcomes in context

The 1990 HMIE report *Measuring Up: Performance Indicators in Further Education* proposed that when PIs are used as evaluation tools, they can serve one or both of two broad purposes. When used **formatively**, they can assist college staff, at all levels, to improve the quality of provision. When used **summatively**, they can provide a basis on which an opinion of the overall health of an institution's education provision may be formed. More specifically the report proposed that PIs could be used in combination to:

- inform the planning process and put resource allocation on a more realistic footing;
- provide a focus for the involvement of academic planning;
- assist ongoing monitoring of effectiveness and efficiency; and
- evaluate educational provision and its quality.

In 1993, the follow-up HMIE publication *On Target: Using Performance Indicators in Colleges of Further Education* developed the use of PIs and their role as a tool for analysis and decision making at departmental/section and college levels. The report concluded:

> *Student experience is at the heart of any attempts to improve the quality of vocational education and training. The quality of that experience needs to be carefully monitored and care should be taken to evaluate it using the whole range of PIs and not emphasising a single indicator at the expense of others.*

Since these reports were published the college sector has undergone considerable changes, including incorporation and the formation of the Scottish Further and Higher Education Funding Council.

In *Improving Scottish Education* (2006) HMIE reported that:

> *Colleges have been successful in encouraging lifelong learning through a wide range of flexible arrangements which have led to learners achieving well and developing core skills, personal skills, vocational skills and other skills for employability.*

> *However, despite developments in quality improvement arrangements over the last few years, weaknesses are still prevalent in the approaches of some programme teams and colleges to quality assurance and improvement activities. Programme teams often make insufficient use of programme and unit attainment data in the analysis and evaluation of the effectiveness of programme delivery.*

SFC (and formerly the Scottish Further Education Funding Council (SFEFC)) has produced an annual set of college sector PIs since 2000-01. This practice was introduced in response to the then Scottish Executive stating that, "good, robust and relevant performance indicators at college level are essential measuring tools for the promotion and sharing of good practice

amongst colleges", and that the Council should, "review the range of PIs considered necessary, and then put in place appropriate mechanisms to establish, measure and publish these."

The current set of PIs deals with measures such as student induction, retention, student outcomes and achievements, staff qualifications and financial health. The most recent annual publication *Student and staff performance indicators for further education colleges in Scotland 2006/07* (August, 2008) restates the purposes of these PIs, which:

- *provide better and more reliable information on the achievements and impact of Scotland's colleges;*
- *inform college self-evaluation to lead to self-development;*
- *enable individual colleges to benchmark their own achievements against that of other colleges and thus lead to quality improvement;*
- *inform HMIE reviews;*
- *inform policy developments; and*
- *enhance accountability for use of public funds in colleges.*

Use of PIs for quality improvement

Colleges use PIs as a helpful aid and focus for self-evaluation by programme teams and cross-college teams responsible for areas such as guidance and support. Used correctly, the data stimulate staff to ask appropriate questions to identify strengths and weaknesses at programme and college level and then plan actions to address identified areas for development. However, it is important to be able to interpret PI data and contextualise these indicators as guides or signals of the quality of their provision, rather than absolute measures.

HMIE's *Effective Self-Evaluation Reporting in Scotland's Colleges* (October, 2007) stated:

> *Almost all colleges have highly effective systems for providing accurate up-to-date PIs on learner retention and attainment for teaching teams to analyse in self-evaluation reports.   Most self-evaluation reports by teaching teams at least acknowledge low value PIs. Where reports analyse underlying reasons for these in more detail, these sections usually demonstrate detailed staff knowledge of individual learners' circumstances.*

Routinely, colleges use a suite of PIs to inform self-evaluation by reference to measures of:
- **learner retention:** Student Retention Rate 1 (SRR1), early retention, Student Retention Rate 2 (SRR2) and student retention;
- **programme attainment:** Student Programme Attainment Ratio (SPAR), and student outcome;
- **unit attainment:** Student Achievement by Unit (SARU); and
- **post-programme success:** Post Course Success Ratio (PCSR).

Definitions of these PIs are given in appendix 1 and chapter 5 of this report discusses their use in colleges. A useful description of the main PI measures is given in the SFC publication *Student and staff performance indicators for further education colleges in Scotland 2006/07* (2008).

Benchmarking tool

The Scottish Funding Council has developed an analytical tool to assist college staff with responsibilities for quality assurance and enhancement and teaching staff in their analysis of the statistical data the Council provides on learner retention and attainment. The analytical tool is based on an Excel spreadsheet that uses a series of filters to select data in a particular subject area or programme and to enable the user to compare data with those from other colleges.

The use of PIs during external review by HMIE

HMIE review teams use PIs to:
- inform evaluations of learner retention and attainment;
- provide evidence of the impact of college policies and strategies; and
- establish how effectively staff use PIs as tools for improvement, to contribute to the teams' evaluations of outcomes for learners and the effectiveness of self-evaluation in colleges.

Over the period 2004-08 subject reviewers analysed data on learner retention and attainment to inform their evaluations using QI A7.*2 Learner attainment*. They informed their judgements about A8 *Guidance and support* by reference to data on early retention, learner retention and post-course success. Cross-college reviewers used PI data to provide evidence of progress the college had made against key aims and objectives (QI B1.4 *Achievement of educational aims, objectives and targets*). They used PI data to explore college arrangements for monitoring the impact of equality policies including analysis of learner applications, admissions, level of achievement and reasons for leaving by gender, age, disability and race (QI B2.2 *Arrangements for access and inclusion*). Reviewers of guidance and support used PI data to explore with college staff the reasons for low values for early retention and learner retention levels and the effectiveness of strategies to improve retention and the impact of interventions made. Reviewers of B6 *Quality assurance* and B7 *Quality improvement* explored staff use of PIs to provide evidence of the effectiveness of self-evaluation for quality improvement in colleges. They investigated programme team reports, subject area evaluations, analysis of trends, and interventions to address low retention and attainment.

Capturing an all-round picture of attainment and achievement

The current measures do not reflect the full picture of the learning, achievement and attainment that takes place in colleges. For example, these measures cannot :

- recognise additional achievements and give credit for successes outside the conventional measures, possibly against personal learning goals;
- give credit for partial attainment (although the student outcome PI does go some way towards addressing this);
- recognise *soft skills;* and
- recognise *distance travelled*.

Colleges have attempted to give structure to forming a more holistic view of overall progress and attainment by considering not simply attainment of a programme award or units, but the broader set of skills a learner may have achieved during their period of study. The Scottish Government's *Skills for Scotland: a Lifelong Skills Strategy* (2007) defines skills by focusing primarily on several **overlapping clusters of skills**:

- ***personal and learning skills*** *that enable individuals to become effective lifelong learners;*
- ***literacy and numeracy***;
- *the five* **core skills** *of communication, numeracy, information technology, problem solving and working with others;*
- ***employability skills*** *that prepare individuals for employment rather than a specific occupation;*
- ***essential skills*** *that include all of the above; and*
- ***vocational skills*** *that are specific to a particular occupation or sector*.

The strategy document also identifies **softer skills**, which are less definable, but that employers value as vital to the success of their organisations. These include:

- *effective time management;*
- *planning and organising;*
- *effective written and oral communication skills;*
- *the ability to solve problems;*
- *being able to undertake tasks or make submissions at short notice;*
- *the ability to work with others to achieve common goals;*
- *the ability to think critically and creatively;*
- *the ability to learn and to continue learning;*
- *the ability to take responsibility for professional development; and*
- *having the skills to manage or be managed by others.*

This more holistic view of overall achievement and attainment has also been reflected in the SFC/HMIE Quality Framework (May 2004) and in external evaluation of learner progress and outcomes by HMIE.

The quality indicator for **learner progress and achievement (A7.1)** considered the progress made by the learner from prior attainment,

achievement, learning and experience as a result of a programme of study. This would include progress towards learning goals, progress from the start of the programme and progression towards further study and employment. It would also include progress of a learner in gaining skills for learning and employment.

The quality indicator for **learner attainment (A7.2)** considered outcomes of learning such as attainment of formal qualifications, attainment of industry related awards and tests, retention, post-course success including progression to HE or relevant employment, and success in award schemes and competitions.

The wider achievement and progress across the areas covered by quality indicators A7.1 and A7.2 is often referred to as **distance travelled**.

Measures of achievement and distance travelled

Most colleges recognise the value in developing some measure of wider learner achievement to complement attainment measures. Butcher and Marsden's article *Measuring Soft Outcomes: A Review of the Literature* (2004) reported:

> *The literature to date has emphasised the need to measure soft outcomes as evidence of a stepping stone linking non-accredited/soft learning with progression to a hard outcome, such as a job or taking an accredited educational course. Such an approach narrows the interpretation of social inclusion to employability and educational achievement and ignores vast swathes of the community and voluntary sector working with clients who may never access jobs or educational qualifications. There is a value to society when informal learning leads to increased motivation and feelings of responsibility, confidence and self-esteem, interpersonal skills, improved individual appearance, time management and teamwork for the individual.*

For measures to assess wider achievement to be developed and nationally accredited a number of issues need to be considered in developing monitoring systems, including:
- understanding what the process of developing a soft outcome monitoring system would require and how much effort it would take;
- deciding on what to monitor and what systems to use;
- deciding how to assess;
- establishing baselines of learners' soft skills;
- reviewing learner progress to assess distance travelled;
- using a credit framework (such as SCQF) with no prescribed curriculum but with clear routes and opportunities for progression;
- using a common tool such as an individual learning plan (ILP) as a means of agreeing goals and recording progress as well as a tool for discussion; and

- ensuring a nationally recognised system of certification to record SCQF-levelled credit achieved by individuals or to record levels which learners are working towards.

This approach places learners and their aspirations and goals at the centre of the learning process. While it is the responsibility of professional educators to encourage learners to progress and fulfil potential, it is important to recognise that formal awards or employment may not be what individuals require from their learning. The absence of such a clear end point does not invalidate the progress they have made through learning. Learners decide for themselves what their goals are (employment, progression to further learning, or personal achievement and development) and of what their learning should consist. They should furthermore be involved at every stage of the planning, monitoring, assessment and accrediting process.

An important outcome of assessing distance travelled is that learners are enabled to identify personal change in their lives as a result of their learning; to articulate their different perceptions and insights into their lives, relationships and self-image. As well as being assisted in describing these changes, individual learners should be supported in capturing their formal and informal, mediated and unmediated learning experiences.

Assessing achievement

For a learner, the potential outcomes of a system for assessing wider achievement include employability, progression to other learning, more active participation in communities and personal change. Individual learning plans need to be designed in a way to capture learners' aims, aspirations and outcomes, and learners' perceptions of themselves, their histories and their futures. The plans are likely to include those overlapping skills clusters and softer skills identified in the *Skills for Scotland* strategy document.

A number of collection methods can be used to capture learners' aims, aspirations and outcomes which focus on the broader context of the learner and their perceptions of their situation, including self-completion questionnaires, tests, portfolios, reviews and recorded observations. These collection methods may involve reviews, observations and peer assessments, as well as tutor and self-assessment. Scales of feeling or agreement with statements, comparisons with previous benchmark data, self-reflection reports, and assessors' views are all useful in measuring soft outcomes.

Validating achievement and distance travelled

All systems of monitoring and recording achievement should be subject to local audit and robust quality assurance procedures and external monitoring. This should include a process of validation and certification that recognises vocational experience and skills, entrepreneurship and initiative taking, volunteering, team and community involvement, and other factors. These

systems should also represent skills in terms of employability, transferability to vocational or academic further study and personal change and achievement, or a combination of different elements that can be built upon at a future time.

5.   Learner attainment

Measures of attainment

Colleges used attainment PIs in a variety of ways. Almost all colleges (94%) used the **early retention** measure or **SRR1**. Most colleges (82%) used the **student retention** measure and a majority of colleges (67%) still used the **SRR2**. Some colleges made use of both the student retention and SRR2 PIs.

Most colleges (67%) continued to use the **SPAR** as a measure of programme attainment and the majority of colleges (70%) were making use of the **student outcome**. Almost all colleges (91%) used the **SARU** as a measure of unit attainment on programmes. Some colleges were using both the SPAR and student outcome as measures of programme attainment.

College comments on the use of the student outcome measure included:
- *student outcomes have been used rather than SPAR for several years;*
- *we have placed less emphasis on student outcomes until recently;*
- *student outcomes are considered for the overall picture and for benchmarking;*
- *student outcomes are considered for overall picture – more useful than SPAR and SRR2 for flexible learning;* and
- *we ceased using SPAR in course evaluations as SFC did not publish it in its publication of PIs in 01-02 and has not printed it in any of the subsequent annual publications. We were surprised when we realised that HMIE were still using it as a measure of programme success in the current cycle of reviews.*

A majority of colleges (61%) used the **PCSR** to report on post-course success of learners. Most colleges reported difficulty in collecting the data and questioned their robustness. However, more than a few colleges had put considerable effort into collecting and reporting destination data. One college reported a 90% response rate from learners and had developed a *progression viewer* that incorporated employment, articulation and progression information, which could then be used by all staff for programme planning, evaluation, marketing and other purposes.

Some colleges used **additional measures** to demonstrate learner attainment, including targets set by other partners (eg ESF) and grades from external examination results. A few colleges reported on learner success in national competitions.

Use of the measures to evaluate learner attainment

Almost all colleges used attainment PIs at programme team meetings and in programme team self-evaluation reviews, followed by collation and scrutiny at section/department level, and college-wide scrutiny by senior managers and committees such as academic boards. Colleges also used attainment data to:
- identify concerns;

- inform actions for improvements;
- identify good practice; and
- inform curriculum portfolio planning.

Programme teams discussed attainment measures at regular meetings, to monitor attainment on an ongoing basis. These measures were also used at more formal meetings – usually held twice or three times a year. Finally, almost all colleges considered and reported on the measures as part of the annual programme review process.

In more than a few colleges, programme teams undertook some benchmarking of their PIs and set targets against which PIs were evaluated. In a few colleges, programme teams used PIs to monitor retention and attainment trends over time.

At section/departmental **curriculum area** level, a majority of colleges implemented collated subject area review and reporting, based on data from the programme teams. In a few colleges, this process also incorporated benchmarking, target setting and monitoring trends.

More than a few colleges reviewed and evaluated overall attainment at **college level,** including scrutiny by Boards of Management. In a few colleges this process also incorporated benchmarking, target setting and analysing trends over time.

More than a few colleges used attainment data to identify concerns and inform actions for improvements at programme, curriculum area and college levels. A few colleges used low PI values to trigger investigation and remedial action, making use of *traffic lights* or *heat maps* to inform programme teams and managers.

A few colleges used attainment PIs to assist identification of good practice at curriculum area level or college level.

More than a few colleges made use of attainment data to inform planning, generally relating to the college curriculum portfolio or programme design. A few colleges inserted the data into operational plans, as a basis for planning. A few others used the data to inform decisions to change programmes or delivery methods.

Use of PIs for external comparisons

Most colleges were not convinced about the usefulness of the publication of aggregated PIs for individual institutions and the meaningfulness of cross-college comparisons at this level. They acknowledged the need for accountability for the use of public funds but questioned the interpretation of PI measures and how this interpretation relates to a perception of college effectiveness, since an external audience is unaware of factors affecting the values of PI measures. For example, learners leaving a programme prior to

completion because they had gained employment would impact negatively on retention and outcome measures, although the learner may regard the outcome as successful.

Collection and processing data on attainment

Annually colleges collect and process thousands of pieces of data on learner attainment. All colleges involve administrative support to assist with this process - usually referred to as management information systems (MIS) or student records.

Colleges made a distinction between formal, signed off, validated data and the data that were available to programme teams or departments as a result of their day-to-day contact with learners. In more than a few colleges, staff were able to access their data in real time, as it was keyed in, and/or by interrogation through specific MIS reports.

A number of colleges recognised that certain data were only of use at certain points in the academic year, and made arrangements to have the data issued at these most useful times. One college, for example, noted that its guidance tutors used real-time information weekly, while programme teams used it quarterly. Another provided real-time data on retention only.

A majority of colleges issued data at the end of each teaching block and/or at the beginning of the following academic session. This was the fully validated and checked data that was used for SFC returns and publications.

None of the colleges mentioned learners as potential users of data and how learners might be issued with, or might access, data.

Ensuring accuracy of data

Nearly half of colleges reported some form of liaison and crosschecking between the academic team/department and the MIS department to ensure accurate data. More than a few colleges involved their quality unit/staff/system in ensuring accuracy, including formal auditing. One college noted that an online process for entering learner results had significantly reduced error.

Evaluating attainment in non-nationally recognised qualifications, work-based and open/online learning

More than a few colleges had tried to provide a coherent framework for assessing non-nationally recognised qualifications, for example by:
- developing college/locally devised units;
- providing college certification; and
- concordat rating their provision against the SCQF.

Where the non-nationally recognised programmes were delivered through units, colleges generally used the 70% success criterion to signify successful programme attainment. However, a few colleges felt this was a crude measure and two colleges set their criteria in ways that they considered would more accurately reflect the extent of learner success. These colleges argued this to be fairer for more vulnerable learners for whom success might incorporate factors much wider than simply passing assessments.

Several colleges referred to the use of ILPs (and PLSPs in the case of special programmes) and soft skills attainment. A few colleges mentioned that progression to a higher level of study or employment, or course completion, was taken into account in determining attainment on special programmes. A few colleges referred to the achievement of individual learning goals.

Overall, a picture emerged of colleges attempting to provide a clear evaluation of success (which was measurable and of value to the learner) through such things as unitised programmes and established criteria. Where this was not possible or appropriate, colleges used ILPs, targets and goals against which to measure attainment and achievement. Attainment rates in such cases were normally evaluated through the programme review system in line with any other programme.

Colleges generally assessed and evaluated work-based programmes as part of the standard programme review processes. This was predominantly SVQ provision, but also covered awards by other bodies and also un-certificated work-based learning (WBL). WBL was frequently undertaken through certificated units and awards, for example SVQs, which incorporated set procedures for evaluation. Milestones and learner outcomes were another way of evaluating attainment, and there was some online tracking of progress. One college incorporated the recording of core and employability skills in evaluating work-based learning.

Some colleges found difficulties in collecting data for rolling programmes, with one college introducing fixed sessional dates. Another college carried out additional separate cross-sessional analysis.

Lack of consistency in data collection

This issue of lack of consistency across colleges in data collection was raised by about half the colleges. There were clearly strong feelings, particularly in relation to accuracy and unfairness. These colleges had concerns not particularly about the types of measures used, but about the variation in the ways the data were collected, leading to questions about the accuracy of national data and the validity of comparisons and benchmarking. The main problem was the point at which learners were entered for units and programmes – some colleges entered learners at the outset of the programme while others did so much nearer the point of programme completion. This resulted in lower PIs for the first group of colleges.

A related issue was difficulty in managing the administrative procedures in the case of learners choosing options, changing programmes or programme content, and withdrawing. This also was seen as leading to inaccuracies and inconsistencies. Some colleges also perceived variations in practice in recording enrolments, retention and student outcomes in other colleges.

Overall, the sector lacked confidence in the accuracy of the data it collects, as a result of inconsistent practices across the sector. It would be helpful to explore how accuracy and consistency of data entry can be improved, to increase the sector's confidence in nationally published statistics and the benchmarking associated with it.

Views on the attainment measures available

Overall, colleges were positive about the current attainment measures. More than a few were overtly positive, using terms such as *simple but helpful, robust, suitable for purpose, satisfactory, sound basis for quantitative analysis and measurement of internal and external trends,* and *useful within an organisation for trend analysis and benchmarking.*

More than a few colleges specifically indicated satisfaction with the SRR1/early retention measures and SPAR measure. Opinion was evenly split between the few colleges who expressed a preference for either the SRR2 or student retention measure.

Only one college was negative about all of the measures. They had concerns about what this saw as the '*crude' attainment measures and the limitations of the data set.* It took the view that the current data could not be improved and that a radical revision was required to develop a range of indicators/measures that more accurately reflect the impact of the college experience on the learner.

Colleges had mixed views about the use of the student outcome measure. Student outcome gave more comprehensive measures of learner attainment without acting as a proxy for learner retention and was viewed by some colleges as more meaningful than the SPAR for looking at flexible modes of learning. The main barriers to the transition from SPAR to student outcomes were:
- staff familiarity with SPAR;
- currently trend analysis in colleges is based on SPAR data; and
- staff-perceived complexity of student outcomes.

More than a few colleges questioned the value of the PCSR measure. Low levels of questionnaire returns and data accuracy were seen as major issues. However, a few colleges found the data extremely useful for an internal quality-related measure and for programme promotion.

Interpretation

More than a few colleges had concerns about the meaningful interpretation of PI data without background contextual information. Some of these issues were:

- raw data do not indicate the profile of learner groups and social inclusion increases the risk of low PIs, thus true measures of learning and progress are not reflected;
- low SPAR and SARU values can be misleading if viewed as measures rather than as indicators of a successful programme;
- SARU is useful for detailed programme analysis but less so when aggregated;
- measures are distorted by early leavers, for example those taking up late offers of university places or employment; and
- small increase/decrease in numbers can skew percentages in programmes with low numbers and changes are often treated as if they were statistically significant when they drop or rise.

Most colleges used a process of scrutiny and exploration where there are low PI values, and the context taken into account in evaluating the results. The question of interpretation is more likely to be an issue where data are published more widely and no context is provided to surround the PI measures.

6.   Learner progress and achievement

The majority of colleges (60%) recorded evidence of learner progress in all five broad skill areas identified in the SFC/HMIE Quality Framework:

- **personal and learning skills** - self-confidence and self-esteem; self-awareness and self knowledge; attitudes to learning; self directed learning and other learning approaches; analysis and critical thinking;
- **core skills** - communication, numeracy, information technology, working with others and problem solving;
- **vocational skills -** competency and proficiency in the subject/vocational area;
- **employability skills -** in addition to the above: planning and organising skills; customer handling skills; self-management; and creativity; and
- **citizenship skills** - developed through participation in programmes and wider aspects of college life.

A few colleges indicated that not all areas were recorded equally systematically, and a few used the term *soft skills* to describe some of the areas.

How the evidence is collected, recorded and used to assess learner progress

Personal and learning skills were generally recorded in a Personal Development Plan (PDP), Individual Learning Plan (ILP), or similarly named document (the acronym ILP will be used for all these documents in this report). One college used SQA guidance units for FE-level learners and PDP units for learners on HN programmes. Another college used an online self-evaluative resource that learners completed at the start and finish of their programme. A few colleges used systems that involved self-assessment of a range of personal skills.

A majority of colleges carried out core skills profiling or initial diagnostic assessment on learners. Most colleges generally recorded core skills through the usual MIS procedures for unit attainment. Routinely this was restricted to communication, numeracy and information technology.

All colleges also recorded vocational skills through these MIS procedures for unit attainment. A few colleges used additional sources of evidence such as employer reports, placement logs and reflective diaries to demonstrate learner progress.

Colleges recorded skills for employability and citizenship in various ways. More than a few colleges made use of ILPs. Other individual colleges used personal, social and development (PSD) units, work placement units, evidence from programme tutors and guidance tutors, and one college used a *soft skills grid*. One college had defined key competences for employability and used periodic learner self-assessment to record progress.

Almost all colleges used ILPs as the vehicle for recording progress and achievement, supported by periodic reviews with a guidance tutor to discuss progress, plan any support required, and provide feedback to the learner. Colleges routinely used Personal Learning and Support Plans (PLSPs) as carriers of progress and achievement information for learners on Dominant Programme Group 18 provision.

ILPs use within colleges varied:
- in the coverage of learners, with some colleges including only FT learners;
- in the nature of the plans, to match the requirements of different groups of learners (trainees, FE, HE, introductory, special programmes, etc); and
- as a result of initiatives by the particular curriculum sections or programme teams using them.

Across colleges, perceptions of how the ILPs were to be used varied. Some colleges viewed them as a pragmatic record of progress and outcomes. Others saw them more as a means of promoting learner understanding and ownership of their progress and providing motivation for further development of transferable personal and employability skills. In most colleges learners were encouraged to use the plans to reflect on their learning and their progress made.

More than a few colleges were developing learner self-assessment approaches focused on learner ownership and self-development. A few had built on some of the *Focus on Learning*[2] initiatives.

One college had been involved in an extensive set of developments, including mapping all activity to SCQF competences, working with their MIS software supplier to explore a distance travelled measure based on individual student entry and exit levels based on SCQF equivalences. The same college had just completed the first phase of a collaborative project with SQA on the development and distanced travelled by learners in gaining core skills at HN level through delivering a PDP unit via its virtual learning environment (VLE). The project was currently in a second phase.

Overall, the picture is one of colleges moving towards the effective use of ILP both to **record** and to **stimulate** progress and achievement in the areas cited in the Quality Framework, involving the learner in self-assessment and goal-setting. However, the pace of movement, the progress made by colleges, and the investment in development work all varied greatly.

More than a few of colleges also used data on learner progress and achievement to inform the programme review process, and subsequently contribute to college-wide statistical reports and inform improvements in teaching and learning.

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[2] *Focus on Learning 2: Steps to Employability*, an SFC/SFEU action research project.

Assessing distance travelled

Most colleges determined prior attainment and achievement of learners using a range of approaches, including:
- prior qualifications and certification including the learner's SQA record;
- discussion at pre-entry interview to explore prior learning and experience, and assess level of ability;
- core skills testing, diagnostic testing and profiling; and
- guidance interview and induction process – often used as the focus for setting up the ILP, which could include self-assessment.

In addition, a few colleges used:
- evidence of performance – art portfolio, drama audition, essay or written exercise; and
- vocational skills assessment.

Colleges used a range of approaches to assess attainment and achievement of learners at the end of a programme. These generally fell into the following categories:
- qualifications attained and PI data;
- pre-exit guidance process: including review, the guidance units attained, changes in soft skills, attainment of goals set in ILP, and self-assessment;
- exit core skills profiling;
- citizenship and workplace awards, and activities to assess progress in citizenship and employability; and
- progression to employment or further study.

One college also included views of parents/guardians/carers on the achievements of their children undertaking a range of college-based programmes.

These categories were a mix of **objective measures** (qualifications, core skills certification, some forms of progression), **subjective assessment** (soft skills progress, achievement of personal goals) and **semi-objective measures** (citizenship and workplace awards).

One college had the view that distance travelled was *recognised*, but not *assessed,* while another acknowledged that it was only possible to assess distance travelled if there were clear and quantified start and end points. A few colleges referred to quantifiable measures, in terms of assessing distance travelled by the attainment of units.

Most colleges assessed distance travelled in terms of the learner and tutor reviewing individual learner achievements, including assessment of progress against goals. Only one college mentioned measures of distance travelled in respect of its mechanism for measuring progress towards employment.

Overall, where colleges made serious attempts to assess distance travelled, it was generally done informally and on an individual learner basis, employing techniques of self-assessment and reflection.

Development of national distance travelled measures

Most colleges thought that the **development of national measures was desirable**, although the majority of these colleges gave some form of response with caveats. This included almost all of the colleges that had engaged in significant development work on progress, achievement and distance travelled, and these colleges had evidently drawn on their experiences of trying to measure distance travelled to inform their responses.

Comments by those colleges who thought it **desirable** included:
- *the use of CGLI awards in employability;*
- *helps benchmarking;*
- *reinforces the significance in promoting wider access to education;*
- *helps to quantify qualitative information, evidence source for HMIE;* and
- *there is a need for nationally recognised measures that more accurately reflect the importance of the college experience.*

College that thought it was **not desirable,** or expressed an overall negative view, made the following points:
- *too complicated;*
- *would be more meaningful to develop a toolbox to support colleges in quantifying distance travelled;*
- *national application doubtful;*
- *aggregated national comparisons not useful;*
- *distance travelled is a measure for individuals;*
- *Focus on Learning 2 project findings – no single tool could be recommended for general use, such is diversity of learner needs (SFC Circular 15/2007);* and
- *flaws in existing PIs could be magnified.*

Almost all colleges recognised the potential benefits to learners of a distance travelled measure in terms of recording learner confidence and self-esteem, self-reflection, motivation, recognition and evidence of employability and soft skills. A few colleges thought it would also raise awareness of the learning process and promote routes through lifelong learning.

More than a few colleges recognised potential benefits of a national measure to them as institutions, including:
- single point of reference for educational/societal development;
- comparability for benchmarking;
- assist in improving programme design;
- common baseline, opportunity to publish results;
- measures how well college makes a difference; and
- useful as indicators, rather than measures.

Colleges were equally split on the benefits to employers and society of a distanced travelled measure. Those in favour saw benefits, through the provision of some measure of employability and soft skills. One college saw such national measures being linked to the principles within a *Curriculum for Excellence*, and learners developing the capacities to be:

- successful learners;
- confident individuals;
- responsible citizens; and
- effective contributors to society and the economy.

However, another group of colleges were of the view that employers would find the measures confusing, and that employers are more interested in attainment outcomes than distance travelled.

Overall, colleges considered that developing national measures would be challenging, difficult and highly complex, as well as expensive in terms of time and resources. The range of issues and barriers identified was very wide, with almost every response including caveats to the development. These included the following categories of comment that overall outweigh the more positive views of what could be achieved:

- to implement the development of national measures would require the whole sector to sign up to the development, and there is unlikely to be general agreement on methods, definitions, etc.;
- difficulties around developing a system to make national comparisons because of the subjectivity inherent in the measures;
- difficult to identify the measure(s), quantify them and produce a reliable analysis of the outcomes. There would be serious barriers to achieving a uniform and useful measure and agreement would be unlikely;
- issues relating to the very individual nature of the process of assessing distance travelled, including difficulty of establishing start points, difficulties in accurate self-assessment, the diversity of learner characteristics, and diversity of context;
- costs in time and resources, nationally and to individual colleges, could be excessive and/or divert energies from other important areas;
- the approach would need to incorporate a balance between flexibility (to best match needs of diversity of learners) and the uniformity and consistency required for national use. Fears that flexibility would be lost;
- flaws in the existing PIs could be overstated if additional measures were in place;
- concerns over the compulsory or voluntary nature of such a scheme; and
- the need for staff development, and staff buy-in to the development.

Several colleges made suggestions for ways of approaching some aspects of the issue. One suggested looking at the old PSD units. Another recommended the use of formal frameworks such as ASDAN, and SCQF, only where appropriate. Several colleges referred to SCQF, and while finding

it useful, a few found it limited in this context. One college made reference to the imperatives of a *Curriculum for Excellence* and the SFC's *Learning for All* strategy. One comment, however, goes some way to summarising the general tenor of the responses:

> *Requiring all colleges to have evidence of the discussion and recording of progress in terms of value added and distance travelled 'soft skills' might improve the practice of colleges not currently doing this. However, developing a formal mechanism for this would be fraught with difficulties in responding to different student groups and circumstances.*

7.   The use of benchmarking and trend analysis

Approaches to benchmarking

Colleges generally adopted three broad approaches to benchmarking attainment and achievement data: internal benchmarking, benchmarking in partnership with other colleges and external benchmarking against national data and other information.

Overall, a range of **internal benchmarking** took place, although it was evident that benchmarking activity was far more embedded in some colleges than in others. Some colleges specified that benchmarking took place at programme or team level as well as in respect of global data. The range of activities included:
- year-on-year internal comparisons and trends;
- cross-college PI analysis;
- comparisons with college targets;
- inter-faculty comparisons; and
- comparisons against national averages.

About half the colleges were involved in **benchmarking in partnership with other colleges**. The college groupings mentioned, with some examples of their activities were:
- Aberdeen, Stow and Dumfries and Galloway Colleges – meetings three times a year to compare data and processes;
- the Scottish Rural Colleges Network Academic Benchmarking Project;
- the Quality Quadrant – Dundee, Glasgow Metropolitan, Jewel and Esk Colleges and Glasgow College of Nautical Studies – events for FE-level subject areas focusing on retention and achievement;
- the six Lothian colleges;
- the East-West colleges benchmarking club;
- the Quality Managers' Enhancement Forum (seven colleges) compared programmes with low PIs in 05-06 and set up subject networks to address issues; and
- a benchmarking club comprising Cumbernauld, John Wheatley, North Glasgow and Langside Colleges.

About half the colleges used **external benchmarking against national data**. Most of these cited SFC PI data and, in some cases, FES data supplied with the SFC benchmarking tool, and a few also used data from SQA. Several benchmarked against nationally published data for other colleges that resembled them in some way, for example the proportion of learners from the 20% poorest SIMD zones or of similar size. A few also used HMIE college review and aspect reports, including the SLIPs, as a way of benchmarking against good practice. In addition, several colleges visited other colleges to compare practices, and one or two brought in Associate Assessors from other colleges to support informal quality improvement reviews.

Use of the SFC benchmarking tool

Most colleges found the SFC benchmarking tool helpful, and a few had given all staff access to the tool. However, the tool had limitations at this stage of its development. Some colleges found it slow and cumbersome to use, not user-friendly, especially for staff unaccustomed to using spreadsheets. However, a few colleges indicated that problems had been resolved after consultation with or feedback to SFC, and many were optimistic about the tool and intended to use it more in future. Development visits by SFC staff to colleges to explain its use had been particularly helpful.

Benchmarking focusing on learner progress and outcomes: impact on quality

Almost all colleges used their benchmarking activities to inform quality improvements. Retention, attainment and related measures were benchmarked, although few colleges benchmarked the achievement of soft skills. A majority of colleges used benchmarking to identify areas where there were weaknesses, in order to make improvements at programme team, department or college level. The concept of benchmarking was also widened to looking at good practice within or across colleges and used as a benchmark of standards to be reached. A few colleges also highlighted areas where there were strengths, to identify good practices and share them more widely. These colleges did this as part of programme/section review, or as a result of SLIPs published by HMIE. A few colleges also used benchmarking activity to feed into their planning processes, including programme design and team operational plans.

Trend analysis

Almost all colleges had embedded some form of trend analysis covering aspects of attainment, progress and achievement into their systems and processes, and this analysis had the capacity to inform teams at all levels. A majority of colleges carried out trend analysis at both programme and college level, and a few also included cognate groups or school/section level.

A majority worked to a three-year cycle, but there were variations, partly according to the purposes for which the trend analysis was intended. For example, one college looked at three-year data at programme level and five-year data at college level. Another college looked at year on year data at all levels, but at three-year data for academic planning. And yet another college worked on a four-year cycle at programme and team level, looked at three years of data for the annual portfolio review process and had a full five-year curriculum review.

Most colleges used retention and SPAR data for trend analysis. A few colleges used student outcome. A few colleges also carried out trend analysis using PCSR or progression data and learner satisfaction survey data.

In most colleges MIS or student records staff collected data, with analysis undertaken by academic staff or teams, with the involvement of quality management staff.

In almost all colleges, trend analysis was embedded into the processes of self-evaluation and review, and linked to quality improvement. Colleges used trend analysis to:
- inform programme design, focus on areas out of the normal trend, leading to programme review or change of portfolio;
- shape the portfolio, identify delivery issues and review delivery methods;
- diagnose problems;
- focus on poor performance or good practice - trigger action planning;
- monitor the effectiveness of interventions; and
- set improvement targets in programme action plans and the college strategic plan.

8.   Recommendations

Colleges should:

- use the early retention and student retention PIs as the measures of learner retention at programme and college level;

- use the student outcome PI as the measure of programme attainment at programme and college level;

- continue to use the SARU PI as the measure of unit attainment at programme and college level;

- give close attention to a *Curriculum for Excellence* developments in recognising and accrediting learning across the four capacities, not just for 16-18 year old learners but for wider application;

- build on current strengths and continue to develop tools and approaches to assess and record distance travelled that are credible and rigorous and can inform national developments; and

- promote sharing of the outcomes of further development of tools and approaches to record and assess distance travelled and the use of benchmarking.

To support developments nationally, SFC should:

- engage with colleges and with SQA to address issues of consistent methodology for recording data;

- engage with the colleges to establish the scope for developing helpful but non-burdensome indicators of distance travelled; and

- ensure that future iterations of the quality framework used for external review continue to acknowledge both wider achievement and attainment to support holistic evaluations of learner progress and outcomes.

HMIE should:

- use the early retention, student retention, student outcome and SARU as the attainment PI measures in external reviews and other evaluative activities; and

- identify, promote and disseminate further examples of good practice in assessing and recording learner progress and achievement across the wider college sector.

Appendix 1.   Performance indicator definitions

Early student retention / SRR1

Number of enrolments meeting funding qualifying date   x 100
Number of initial enrolments

Student retention

Number of these enrolments completing the
programmes with student outcomes codes 7,8,9,14 and 15   x 100
Number of enrolments meeting the funding qualifying date

SRR2

Number of these enrolments completing the
programmes with student outcomes codes 7,8,9,14 and 15   x 100
Number of initial enrolments

SPAR

Number of enrolments gaining the award   x 100
Number of enrolments meeting the funding
qualifying date

Student outcome

Number of enrolments successful or progressing to next year   x 100
Number of enrolments completing the programme with
student outcome codes 7,8,9,14 and 15

SARU

Number of assessment credits achieved   x 100
Number of assessment credits undertaken

PCSR

Number of successful students who gain employment
or progress to more advanced education or training   x 100
Number of successful students responding

Appendix 2. Examples of good practice

Adam Smith College: The use of PI data to inform decision making

The college viewed PI data as a valuable starting point for discussions and planning for quality of learning and teaching, curriculum design, and overall improvement of the learner experience. Data was available to users on a real-time basis via the college' electronic reporting system and incorporated a suite of reports covering retention and programme and unit attainment for different categories of learners. Data accuracy was monitored at point of entry by MIS staff for completeness and accuracy of keying. Programme teams used PI data effectively to underpin self-evaluation and action planning. Reliable and accurate data was central to all these discussions and was well understood by those involved in decision-making based upon it. The SFC benchmarking tool was also used well to benchmark against a range of comparator colleges at both subject and college level. Trend analysis of attainment data had been a focus on the design and delivery of the non-advanced curriculum, with particular focus on the provision of literacies to support progression and attainment through improved retention.

Borders College: The use of SFC benchmarking tool in care programmes

The staff team in care used the SFC benchmarking tool to support their quality enhancement programme. They identified those colleges in Scotland with high levels of retention and attainment in specific care programmes. The team arranged good practice visits to eight colleges to discuss with staff the approaches and strategies used to achieve successful learner progress and outcomes. The visits had been highly successful. The two-way exchange of practice had supported effective professional dialogue. Following the visits, the team had adjusted aspects of the design of the programmes and enhanced levels of learner support, particularly in the early stages of programmes and where learners were at risk of dropping out. The visits had helped staff address the findings of the HMIE external review of care in 2006. Staff had made good contacts at the colleges concerned and a strong basis for future discussion and sharing of practice.

Jewel and Esk College: Post course success analysis

The college gave priority to the collection and reporting of learner destinations. It routinely achieved a response rate of approximately 90%. Successful strategies to increase response rates included contacting learners at the college's annual graduation ceremony using a call centre for a two-week period including evenings. The college had developed a *progression viewer* for staff that provided easy access to employment, progression and articulation information. The *progression viewer* provided a user-friendly front end to the college's destinations database. It allowed the user to access possible university articulation routes for a specific programme as well as the actual employment and educational routes for past successful

college learners. Employment details included type of employment and employer, whether the employment was full-time or part-time, related or unrelated to the programme studied, and the salary range. The educational route section displayed the college or university learners had progressed to and the programme they had enrolled on. Staff used the progression viewer successfully to inform programme marketing, planning and evaluation.

Jewel and Esk College: Online approaches to core skills

The college had developed an online approach for delivering core skills to learners on HN programmes and accrediting both their achievement and the distance travelled. It had applied the approach to four HNC frameworks: social care, multi media, electrical engineering, and working with communities. Staff had found that these programmes often had no core skills units in the frameworks and that learners' skills were not at the level required to successfully complete other units. The college had worked collaboratively with SQA to develop the HN Personal Development Planning unit using the college VLE and the SQA Academy website. The work aimed to facilitate programme design and delivery and provide teaching and learning to deliver fully the researched core skills exit profile within HN frameworks and programmes. Staff had found that the use of the college's VLE had enhanced learner participation and motivation and provided an attractive means of assessment through e-portfolio and accrediting achievement.

John Wheatley College: The use of ILPs to record and assess learner progress

The college had developed a useful independent learning planning process which provided a solid baseline on which to assess the progress made by learners during their studies. An Individual Learning Plan (ILP) was built up by learners during the pre-entry and induction periods, recording prior attainment and personal learning goals. All learners undertaking full-time and substantial part-time programmes undertook core skills screening and vocational skills assessment. These outcomes were recorded on the ILP. Progress against personal learning goals, attainment of certificated units and achievement of citizenship and employability skills were routinely reviewed through the academic year. This enabled learners and staff to revise the learning goals taking account of progress and to identify support needs as they emerged. The college ran a range of quality enhancement activities, including learner focus groups, to assess the progress made by learners in achieving both citizenship and employability skills. These skills were in line with the four capacities within a Curriculum for Excellence. Pre-exit guidance activities reviewed overall learner achievement to identify progression routes for each individual learner. Learners benefitted from this holistic approach to assessing attainment and wider achievement.

Appendix 3. The use of performance indicators on learner progress in post-16 provision in England and Wales

The UK government has set out the plans for the development of a single framework, *Framework for Excellence*, which provides benchmarked and validated assessment of performance in English colleges. A pilot was carried out in 2007/08 and from 2008/09 the Framework will apply to all colleges and work-based learning providers. There is a core set of PIs that is the minimum to provide a comprehensive picture of performance to all stakeholders.

An overall performance rating is calculated for each college using:
- performance in a range of areas through the use of PIs organised into seven key performance areas; and
- college or providers grades which are aggregated to produce grades for three dimensions – responsiveness, effectiveness and finance.

The *effectiveness dimension* is informed by data from two key performance areas:
- quality of outcomes; and
- quality of provision.

The grade for the performance indicator, quality of outcomes, is derived from four qualification success rates (QSRs). These are success rates for long courses in FE; short courses in FE; A level courses; and apprenticeship and advanced apprenticeship scores. The A level QSR is supplemented by the value-added outcome from the Learning and Skills Council's (LSCs) Learner Achievement Tracker (LAT). This shows how much progress in qualifications individual 16-19 year old learners have made, based on their prior attainment, compared to national results.

The scores for the four constituent elements in the quality of outcomes key performance area is converted into one score using a scoring system. A weighted average of the scores for the four areas in quality of outcomes and the grade for quality of provision is calculated to give a grade of between 1 and 4. In the quality of provision key performance area the key PI will be Ofsted's current judgement on the overall effectiveness of the college or provider. The grades are shown in the table on the next page:

Standard for the dimension		Assessment criteria
Grade 1	**Outstanding**	Sum of grades for constituent key performance areas is 2
Grade 2	**Good**	Sum of grades for constituent key performance areas is 3 or 4
Grade 3	**Satisfactory**	Sum of grades for constituent key performance areas is 5 or 6
Grade 4	**Inadequate**	Sum of grades for constituent key performance areas is 7 or 8

Ofsted is currently working with partner organisations to ensure a coherent relationship between the *Framework for Excellence* and the CIF within the target date of 2009.

Under the current Ofsted reporting system, using the Common Inspection Framework (CIF), all colleges will be inspected at least once between 2005 and 2009. At present colleges normally receive three working weeks notice of their inspection. The timing and level of an inspection depends mainly on:
- the date of the college's last inspection or re-inspection;
- the quality of provision and standards of performance, as reflected in the grades achieved at the last inspection, and the college's performance since that time; and
- other information resulting from monitoring visits or desk monitoring advice from the local or national learning and skills council.

The CIF has been revised to cover five key questions.

1. How well do learners achieve?
2. How effective are teaching, training and learning?
3. How well do programmes and activities meet the needs and interests of the learners?
4. How well are learners guided and supported?
5. How effective are leadership and management in raising achievement and supporting all learners?

Inspectors look at data for learners who have completed their programmes in the last three years. They give more weight to the most recent years and to courses that are currently operating and consider retention rates for existing learners and results of any mid-course external tests, examinations and course work.

One hundred providers were selected for the pilot between September 2007 and March 2008. The pilot tested the assessment criteria and the aggregation from PIs to key performance area, dimension and overall rating.

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Appendix 5.   Colleges participating in this study

The following colleges provided information and views to inform this report:

Aberdeen College
Adam Smith College
Angus College
Anniesland College
Ayr College
Banff and Buchan College
Borders College
Cardonald College
Carnegie College (formerly Lauder College)
Central College
Coatbridge College
Cumbernauld College
Dumfries and Galloway College
Edinburgh's Telford College
Elmwood College
Glasgow College of Nautical Studies
Glasgow Metropolitan College
Inverness College
James Watt College of Further and Higher Education
Jewel and Esk College
John Wheatley College
Kilmarnock College
Langside College
Motherwell College
Newbattle Abbey College
North Glasgow College
North Highland College
Oatridge College
Perth College
Reid Kerr College
Sabhal Mòr Ostaig
South Lanarkshire College
Stevenson College Edinburgh
Stow College
West Lothian College